

# Foreign Drywall Complainant Surveys

2/20/09 - 9/21/09

*Louisiana Department of Health and Hospitals*

## **Background**

The Louisiana Department of Health and Hospitals, Office of Public Health, Section of Environmental Epidemiology and Toxicology (SEET), Indoor Air Quality Hotline began receiving calls from Louisiana residents concerned about foreign drywall on 2/20/09. Approximately 900 drywall calls<sup>1</sup> were received by SEET between February 20, 2009 and September 21, 2009, an overwhelming majority of which are from Louisiana residents living in the Southeastern region of the state. A phone survey created by Florida's Department of Health, reviewed by the Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry (CDC/ATSDR) and modified for Louisiana was administered to callers by SEET staff (Attachment 1). The survey captured information on the physical characteristics of the home, health effects experienced by members of the household, and some demographic information. Survey responses were entered into a Microsoft Access database, duplicates were removed, the data was analyzed, and a descriptive report was developed.

The report summarizing the survey responses is descriptive rather than analytic of the information provided by residents. SEET did not draw any conclusions from the self-selected respondents and self-reported complaints, but rather attempted to characterize the scope and nature of the drywall issues in Louisiana. Between 2/20/09 and 09/21/09, 473 households were surveyed.

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<sup>1</sup> The number of calls received may not represent the number of households that contacted SEET during this period of time as some individuals called more than once and more than one household member may have called SEET to inquire about the drywall issue.

## Survey Results

### I. Location of Home

All but 11 of the households surveyed were located in Southeastern Louisiana with a majority (N=408, 86%) from the Greater New Orleans Metropolitan Area, which includes Jefferson, Orleans, Plaquemine, St. Bernard, St. Tammany, St. Charles, St. John the Baptist, Tangipahoa, Washington and St. James parishes. Approximately 28% (N=130) of households surveyed are located in Orleans Parish (Table 1). See Attachment 2: Map.

<b>Table 1</b>		
<b>Parish</b>	<b>N</b>	<b>%</b>
Orleans	130	27.78
St. Tammany	106	22.65
Jefferson	79	16.88
St. Bernard	67	14.32
East Baton Rouge	16	3.42
Ascension	15	3.21
Tangipahoa	10	2.14
Livingston	7	1.5
St. Charles	6	1.28
Calcasieu	5	1.07
Lafourche	5	1.07
Washington	5	1.07
Lafayette	3	0.64
Plaquemine	3	0.64
Terrebonne	3	0.64
St. John The Baptist	2	0.43
West Baton Rouge	2	0.43
Allen	1	0.21
Bossier	1	0.21
Iberville	1	0.21
Ouachita	1	0.21
<b>Total</b>	<b>468</b>	<b>100</b>

**Note:** Five surveys are missing residence address information.

## II. Case Definition Identifying Homes with Potential Foreign Drywall Issues

Case criteria have been identified by Florida's Department of Health and reviewed by the CDC/ATSDR:

- There is presence of sulfur-like or other unusual odors
- Confirmed presence of Chinese manufactured drywall in the home
- Observed copper corrosion, indicated by black, sooty coating of un-insulated copper pipe leading to the air handling unit present in the garage or mechanical closet of home
- Documented failure of air conditioner evaporator coil (located inside the air handling unit)
- Confirmation by an outside expert or professional for the presence of premature copper corrosion on un-insulated copper wires and/or air conditioner evaporator coils (inside the air handling unit)

Nearly 90% of households surveyed met one or more of the case criteria (N=427) (Table 2). Fifty-nine percent of respondents (n=279) reported that presence of Chinese drywall in the home was confirmed; 60% reported odors (n=282); 59% reported copper corrosion (n=279); 55% reported air conditioner failure (n=261) and 23% reported confirmation by an outside expert of copper corrosion (n=109) (Table 3).

<b>Table 2</b>		
<b>Number of Criteria Met</b>	<b>Households (N)</b>	<b>%</b>
0	46	9.7
1	96	20.3
2	87	18.4
3	89	18.8
4	102	21.6
5	53	11.2
<b>TOTAL</b>	<b>473</b>	<b>100.0</b>

<b>Table 3</b>		
<b>Criteria Met</b>	<b>Households (N)</b>	<b>%</b>
Unusual odors	282	60
Confirmed Chinese drywall	279	59
Blackening of copper	279	59
A/C evaporator failure	261	55
Expert confirmed premature copper corrosion	109	23

Note: Surveys with blanks in these fields but "Yes" responses in other fields were assumed to be "No".

### III. Household Information

Eighty-eight percent (N=415) of respondents are currently living in the home about which they are concerned (Table 4). Sixty-six percent (N=312) of households reported having natural gas service (Table 5). Over half of the households surveyed had a child/children under the age of 18 (N=244, 52%); and 19% of households had at least one elderly individual 65 years of age or older (N=88) (Table 6).

<b>Table 4</b>		
	<b>Households</b>	
<b>Currently living in home</b>	<b>(N)</b>	<b>%</b>
Yes	415	88
No	45	10
No response	13	3
<b>Total</b>	<b>473</b>	<b>100</b>

<b>Table 5</b>		
	<b>Households</b>	
<b>Natural gas service to home</b>	<b>(N)</b>	<b>%</b>
Yes	312	66
No	147	31
No response	14	3
<b>Total</b>	<b>473</b>	<b>100</b>

<b>Table 6</b>		
	<b>Households</b>	
<b>Households with Sensitive Populations</b>	<b>(N)</b>	<b>%</b>
Households with Children (<18 Years)	244	51.6
Households with Pets	212	44.8
Households with Elderly (≥ 65 Years)	88	18.6

#### IV. Reported Health Effects<sup>2</sup>

The four most common symptoms reported by adults are headache (118, 25%), respiratory infection (80, 17%), eye irritation/redness (75, 16%) and dry cough (68, 14%) (Table 7). The most common symptoms reported among children (< 18 years of age) are respiratory infection, headache, dry cough, nosebleeds and eye irritation/redness (Table 8). Tables 9 and 10 show the “other medical history information”. For both adults and children the most common “other” symptom reported was allergies/sinus/congestion.

Table 7		
Health effect (adults)	N	%
Headache	118	24.95
Respiratory infection	80	16.91
Eye irritation /redness	75	15.86
Dry cough	68	14.38
Irritated throat	53	11.21
Nosebleeds	39	8.25
Rash	20	4.23
Nausea	17	3.59
Dizziness	13	2.75
Asthma development	10	2.11
Diarrhea	9	1.90
Dry mouth	7	1.48
Vomiting	7	1.48
Asthma exacerbation	6	1.27
Runny Nose	4	0.85
Shortness of breath	4	0.85

Note: Runny Nose and Shortness of breath added after 06-12- 2009

Table 8		
Health effect (children)	N	%
Respiratory infection	45	18.44
Headache	32	13.11
Dry cough	30	12.30
Nosebleeds	27	11.07
Eye irritation /redness	21	8.61
Irritated throat	15	6.15
Rash	13	5.33
Asthma development	11	4.51
Asthma exacerbation	7	2.87
Nausea	5	2.05
Vomiting	2	0.82
Diarrhea	3	1.23
Dry mouth	1	0.41
Dizziness	1	0.41

Note: Runny Nose and Shortness of breath added after 06-12- 2009

Table 9		
Other medical history information (adults)	N	%
Allergies/ sinus / congestion	107	22.62
Respiratory problem	27	5.71
Cardiac problems	20	4.23
Headache /migraines	14	2.96
Eye irritation	11	2.33
Sneezing	10	2.11

Table 10		
Other medical history information (children)	N	%
Allergies/ sinus / congestion	32	13.11
Respiratory Problems	12	4.92
Flu-like / fever	10	4.10
Sick (general)	6	2.46
Nosebleeds	5	2.05
Sneezing	5	2.05

<sup>2</sup> Inconsistencies among survey respondents and survey takers in reporting health effects were identified. Confidently distinguishing between health effects that occurred within the last two weeks and those that occurred over a longer period of time could not be accomplished, so it was decided that all health effects recorded would be included in this descriptive report.

Flu-like / fever	9	1.90	Asthma	4	1.64
Sleep(Apnea, insomnia, tired, oversleeping)	9	1.90	Cough	4	1.64
Nosebleeds	8	1.69	Cardiac problems	3	1.23
Cough	7	1.48	Ear infection	3	1.23
Shortness of breath	7	1.48	Headache /migraines	3	1.23
Dry Cough	6	1.27	Diarrhea	2	0.82
Fatigue	6	1.27	Earache / clogged	2	0.82
Runny Nose	5	1.06	Gaining Weight	2	0.82
Asthma	4	0.85	Nausea	2	0.82
Joints	4	0.85	Runny nose	2	0.82
Skin	4	0.85	Seizures	2	0.82
Gastrointestinal Pain	3	0.63	Shortness of breath	2	0.82
High Blood Pressure	3	0.63	Skin	2	0.82
Losing weight	3	0.63	Adenoid	1	0.41
Seizure	3	0.63	Bloody Mucus	1	0.41
Sore	3	0.63	Cerebral palsy	1	0.41
Vertigo	3	0.63	Dizziness	1	0.41
Earache / clogged	2	0.42	Dry Cough	1	0.41
Itching	2	0.42	Respiratory Syncytial Virus Infection	1	0.41
Lenses problems	2	0.42	Spitting Blood	1	0.41
Miscarriage	2	0.42	Wheezing	1	0.41
Multiple sclerosis	2	0.42	Note: Population based on the households surveyed that had a child or children under the age of 18		
Nausea	2	0.42			
Panic Attack	2	0.42			
Sick (general)	2	0.42			
Swallowing problem	2	0.42			
Wheezing	2	0.42			
Blackout	1	0.21			
Blurred Vision	1	0.21			
Burning Nose	1	0.21			
Burning Nostrils	1	0.21			
Cancer	1	0.21			
Chemical taste	1	0.21			
Compromised immune system	1	0.21			
Dehydration	1	0.21			
Diabetes Mellitus Type1	1	0.21			
Ear infection	1	0.21			
Elevated blood count	1	0.21			
Frequent urination	1	0.21			
Gout	1	0.21			
Hair loss	1	0.21			
Hypertension	1	0.21			
Losing Voice	1	0.21			

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Lump In Throat	1	0.21
Muscle loss	1	0.21
Neurological Damage (Extremities)	1	0.21
Non-specific neurologic	1	0.21
Numbness	1	0.21
Parkinsons' disease	1	0.21
Phlegm	1	0.21
Stroke	1	0.21
Swollen Glands	1	0.21
Sweating	1	0.21
Thyroid	1	0.21

The proportion of households reporting one or more selected<sup>3</sup> health effects generally increased with the number of case criteria that the household met (Table 11). Almost half of all households surveyed reported that a member in their household had a selected health effect (n=248; 52%) (Tables 11 and 12).

<b>Table 11</b>		
<b>Households reporting one or more selected health effects and Households that sought treatment</b>		
<b>Number of Case Criteria Met</b>	<b>Households (N)</b>	<b>% of N Reporting Selected Health Effect</b>
<b>0</b>	46	35
<b>1</b>	96	44
<b>2</b>	87	52
<b>3</b>	89	44
<b>4</b>	102	66
<b>5</b>	53	74
<b>Total</b>	<b>473</b>	<b>46</b>

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<sup>3</sup> Selected health effects include headache, nosebleed, dry cough, irritated throat, eye irritation/redness, and asthma exacerbation.

## V. Medical Treatment Sought

Approximately one third of survey respondents (N=153; 32%) reported that an adult in their household had sought medical treatment (Table 11). Over one third of households with children sought medical treatment for a child (N=52; 37%). Ten percent of households with pets sought medical treatment for a pet (N=22).

Table 12		
Medical treatment sought	Households (N)	%
Adults	153	32
Children	52	37
Pets	22	10



VI. Potential Household Inspection Candidates (N=119)

Households were included if they met all 5 criteria or met 4 out of 5 (all except “confirmed Chinese drywall” or “expert confirmed premature copper corrosion”). Tables 13-15 provide a description of the 119 households that met the defined criteria.

<b>Table 13</b>	
<b>Parish</b>	<b>N</b>
ST. TAMMANY	49
ORLEANS	16
ST. BERNARD	15
JEFFERSON	12
EAST BATON ROUGE	7
ASCENSION	6
LIVINGSTON	3
ST. CHARLES	3
LAFOURCHE	2
WASHINGTON	2
OUACHITA	1
PLAQUEMINES	1
TANGIPAHOA	1
WEST BATON ROUGE	1
<b>Total</b>	<b>119</b>

<b>Table 14</b>	
<b>Year Built or Remodeled</b>	<b>N</b>
2008	2
2007	23
2006	81
2005	9
2004	1
2003	1
2002	1
Before 2000	1
<b>Total</b>	<b>119</b>

Note: Where responses in other fields indicated home rebuilt after Katrina but year not indicated in these fields assumed rebuilding / remodeling occurred in 2006.

<b>Table 15</b>	
<b>Households:</b>	<b>N</b>
With 1 or more children < 18 years	69
With 1 or more adults 18-64 years	111
With 1 or more adults ≥ 65 years	19
With 1 or more pets	61
<sup>1</sup> Reporting 1 or more selected health effect	78

Note: Only reports of health effects for adults were used to derive this household count.

## **Attachment 1: Survey**

Name of Interviewer: \_\_\_\_\_ Date: \_\_\_\_\_

Name of Interviewee: \_\_\_\_\_ Interviewee's Phone Number: \_\_\_\_\_

Alternate contact information: \_\_\_\_\_

1. Are you willing to participate in a survey that includes health questions? Yes \_\_\_ No \_\_\_

Please contact: US CPSC 800-638-2772

Louisiana Office of the Attorney General 800-351-4889

Louisiana Free Legal Aid 800-310-7029

2. Type of facility: Residential \_\_\_\_\_ Non residential \_\_\_\_\_ Describe \_\_\_\_\_

3. Address, City, Parish; Zip: \_\_\_\_\_

4. Do you rent \_\_\_\_\_ or own \_\_\_\_\_ ? When did you move into this property? Year \_\_\_\_\_

5. In what year was the property built? \_\_\_\_\_ Remodeled? \_\_\_\_\_ Has suspected

Chinese drywall been installed since 2000? Yes \_\_\_ No \_\_\_ If yes, what year(s) \_\_\_\_\_

6. Are you currently at this address? Yes \_\_\_ No \_\_\_ If no, date moved out \_\_\_\_\_

7. Have you noticed any sulfur-like or other unusual odors? Yes \_\_\_ No \_\_\_

8. Has it been confirmed that Chinese manufactured drywall is present in the property? Yes \_\_\_ No \_\_\_

9. Have you observed any blackening of copper? Yes \_\_\_ No \_\_\_

10. Have you had an outside expert or professional confirm the presence of premature copper corrosion?

Yes \_\_\_ No \_\_\_

11. Have you experienced air conditioner unit problems/failure? Yes \_\_\_ No \_\_\_

12. Was the A/C problem due to copper coil failure? Yes \_\_\_ No \_\_\_ How many times have the copper coils been replaced? \_\_\_\_\_

13. Does the property have natural gas service? Yes \_\_\_ No \_\_\_

14. Number of adults 18-64 \_\_\_ Number of adults  $\geq 65$  \_\_\_ Number of minors  $< 18$  \_\_\_ Number of males \_\_\_ Number of females \_\_\_ Number of pets \_\_\_\_\_

15. Check any symptoms adults have experienced in the last 14 days **OR**, if moved, out in the last 2 weeks of occupancy.

Headache	Yes___No___	Pre-existing___
Nosebleeds	Yes___No___	Pre-existing___
Runny nose	Yes___No___	Pre-existing___
Dry cough	Yes___No___	Pre-existing___
Irritated throat	Yes___No___	Pre-existing___
Respiratory infection	Yes___No___	Pre-existing___
Diarrhea	Yes___No___	Pre-existing___
Vomiting	Yes___No___	Pre-existing___
Dry mouth	Yes___No___	Pre-existing___
Eye irritation		
and/or redness	Yes___No___	Pre-existing___
Dizziness	Yes___No___	Pre-existing___
Nausea	Yes___No___	Pre-existing___
Rash	Yes___No___	Pre-existing___
Shortness of breath	Yes___No___	Pre-existing___
Asthma exacerbation	Yes___No___	Pre-existing___
Asthma development	Yes___No___	Pre-existing___

Other medical history information:

\_\_\_\_\_

16. Check any symptoms minors <18 have experienced in the last 14 days **OR**, if moved, out in the last 2 weeks of occupancy.

Headache	Yes___No___	Pre-existing___
Nosebleeds	Yes___No___	Pre-existing___
Runny nose	Yes___No___	Pre-existing___
Dry Cough	Yes___No___	Pre-existing___
Irritated throat	Yes___No___	Pre-existing___
Respiratory infection	Yes___No___	Pre-existing___
Diarrhea	Yes___No___	Pre-existing___
Vomiting	Yes___No___	Pre-existing___
Dry mouth	Yes___No___	Pre-existing___
Eye irritation		
and/or redness	Yes___No___	Pre-existing___
Dizziness	Yes___No___	Pre-existing___
Nausea	Yes___No___	Pre-existing___
Rash	Yes___No___	Pre-existing___
Shortness of breath	Yes___No___	Pre-existing___
Asthma, exacerbation	Yes___No___	Pre-existing___
Asthma development	Yes___No___	Pre-existing___

Other medical history information: \_\_\_\_\_

17. When do these symptoms occur Morning \_\_\_\_ Afternoon \_\_\_\_ All day long \_\_\_\_ Certain seasons (e.g. winter, summer) \_\_\_\_ No noticeable pattern \_\_\_\_

18. Have you felt better when you are away from the property? Yes \_\_\_\_ No \_\_\_\_

19. Has any adult sought medical treatment for these conditions in the last 2 weeks **OR**, if moved out in the last 2 weeks of occupancy? Yes \_\_\_\_ No \_\_\_\_ Any minors? Yes \_\_\_\_ No \_\_\_\_

20. Have you brought any of your pets for breathing or eye problems to your veterinarian within the last 2 weeks **OR**, if moved out in the last 2 weeks of occupancy? Yes \_\_\_\_ No \_\_\_\_

**Attachment 2: Maps**

